



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/847,111	05/02/2001	Ya-Chan Cheng	148693.00359	5405

7590 05/21/2004  
Thomas T. Moga, Esq.  
Dickinson Wright PLLC  
1901 L Street NW  
Suite 800  
Washington, DC 20036

EXAMINER

STOCK JR, GORDON J

ART UNIT PAPER NUMBER

2877

DATE MAILED: 05/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/847,111

Applicant(s)

CHENG, YA-CHAN

Examiner

Gordon J Stock

Art Unit

2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9-15 and 17-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-15, and 17-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claim 1-23** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, in regards to **claims 1, 9, and 17**, the term following “a lens” “to measure said wafer and said datum slice” is indefinite, for it is unclear as to how a lens measures.

Clarification is required. **Claims 2-8, 10-16, and 18-23** are rejected for depending upon a rejected base claim.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 1-4, 6, 7, 9-12, 14, 15, 17, 19-23** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Elliott et al. (5,669,979)** in view of **Kilgore et al. (6,200,412)** and **Harwood et al. (5,237,267)** further in view of **Rose et al. (5,931,721)**.

As for **claims 1-4, 6, 7, 9-12, 14, 15, 17, 19-23**, Elliott in a photoreactive surface processing device discloses the following: a stage with chuck (Fig. 15, 436, 476, 440); a lens (430 of Fig. 15); a gas supplier with a first nozzle (Fig. 15: 434; Fig. 16); first tube is suggested

Art Unit: 2877

from Fig. 16; a transport slot with an exhaust/evacuation system comprising an evacuation valve and mechanical pump, the gas-extracting motor (Figs 15 and 16); a first flow regulating valve on first nozzle (Fig. 16: 482); an inert gas, helium and nitrogen (Fig. 11: input gas and helium). As for a datum platen, the wafer itself is the origin of the data and placed with a chuck. Kilgore in a cvp system teaches that chucks and platens are functional equivalents for wafer support (col. 2, lines 12-13). Therefore, it would be obvious to one skilled in the art at the time to use a platen rather than a chuck, for they are interchangeable as equivalent support structures for wafers. In addition, Harwood in a wafer probe station having auxiliary chucks teaches that multiple chucks should be used in order to accommodate systems for calibration substrates (col. 1, line 55-67; col. 2, lines 1-15). Therefore, it would be obvious to one skilled in the art to have the system also comprise a chuck/platen for other substrates such as calibration substrates for calibrating the system. As for a second nozzle, Elliott is silent. However, Rose in an aerosol surface processing system discloses two nozzles opposing each other to improve wafer-cleaning performance (col. 10, lines 59-67; col. 11, lines 1-10; Fig. 5). Therefore, it would be obvious to one skilled in the art at the time the invention was made to have two nozzles to enhance wafer-cleaning performance. As for a second tube and a second gas-regulating valve, Rose discloses this (Fig. 5) in order to deliver the second flow of gas to the system and to regulate its delivery pressure.

As for a third tube for the extracting apparatus, Elliott shows this (Fig. 16: between 445 and 446.)

**5. Claims 5, 13, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elliott et al. (5,669,979) in view of Kilgore et al. (6,200,412) and Harwood et al. (5,237,267) further in view of Rose et al. (5,931,721) further in view of Danese (6,272,768).**

Art Unit: 2877

As for **claims 5, 13, and 18**, Elliott in view of Kilgore, Harwood, and Danese disclose everything as above (see **claims 1, 9, and 17** above). However, Elliott is silent concerning a venturi structure for the mechanical pump. Danese in an apparatus for treating something in UV light teaches that venturi pumps are typical vacuum pumps for withdrawing fluids (col. 7, lines 5-25). Therefore, it would be obvious to one skilled in the art at the time the invention was made that the system may comprise a venturi structure for typical vacuum pumps for withdrawal of fluids comprise venturi effect pumps.

#### ***Response to Arguments***

6. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

#### ***Fax/Telephone Numbers***

If the applicant wishes to send a fax dealing with either a proposed amendment or a discussion with a phone interview, then the fax should:

- 1) Contain either a statement "DRAFT" or "PROPOSED AMENDMENT" on the fax cover sheet; and
- 2) Should be unsigned by the attorney or agent.

This will ensure that it will not be entered into the case and will be forwarded to the examiner as quickly as possible.

*Papers related to the application may be submitted to Group 2800 by Fax transmission. Papers should be faxed to Group 2800 via the PTO Fax machine located in Crystal Plaza 4. The form of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CP4 Fax Machine number is: (703) 872-9306*


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gordon J. Stock whose telephone number is (571) 272-2431. The examiner can normally be reached on Monday-Friday, 10:00 a.m. - 6:30 p.m.

Art Unit: 2877

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

  
gs

May 17, 2004

  
Zandra V. Smith  
Primary Examiner  
Art Unit 2877